

REMARKS/ARGUMENTS

Claims 1-15, 22-36, and 43-57 are pending.

Claims 1-3, 14, 15, 22, 35, 36, 43, 56, and 57 are rejected under 35 U.S.C. § 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter.

Claims 1-15, 22-36, and 43-57 are rejected under 35 U.S.C. § 102(e) as being anticipated by Regnier et al., U.S. Patent No. 6,647,423.

An interview was conducted with the examiner on May 3, 2006. A discussion was conducted regarding the nature of some of the Section 112 rejections of the claims. As to the Section 102 rejection, it was explained that the recited "sender" read on Regnier's host computer system 502 (Fig. 5) and that the recited "target" read on Regnier's VI NIC 500 (virtual interface network interface controller). Since the Office action was not clear on this point, the examiner's clarification is appreciated. The following discussion traversing the Section 102 rejection of the claims is therefore based on this understanding.

Section 112 Rejection

As to the objection raised regarding the recited "a transmit portion" and "a retain portion," the claims have been amended to more clearly recite receiving "a data item including a transmit data portion and a retain data portion"; e.g., claim 1. In claim 15, "a data item" is recited. As to the recited "return portion," the claims have been amended to recite "return data."

The illustrative embodiment of Fig. 1 of the pending specification clearly shows a forward item being received at controller 106A. Fig. 1 also shows a transmit portion and a retain portion. The specification at page 6, line 5 explains that the forward item includes a transmit portion and a retain portion.

In the Office action, it was noted that transmit portion, retain portion, and return portion were unclear as to what they consist of. By reciting "data", it is believed that the claims are clear as to "what" is being manipulated.

The Office action also objected to "the same tags" and "the same order", citing lack of antecedent basis. The claims have been amended to recite "identical tags" and "identical

order.” Based on the foregoing amendments, the Section 112 rejections are believed to be overcome.

Section 102

Column 3, line 39 to col. 4, line 57 (description of Figs. 5 and 6) and col. 5, line 28 to col. 6, line 61 (description of Figs. 7-11) of Regnier were cited. During the interview with the examiner, it was explained that the recited “sender” read on Regnier’s host computer system 502 (Fig. 5) and that the recited “target” read on Regnier’s VI NIC 500 (virtual interface network interface controller). The discussion which follows assumes this interpretation of the Regnier reference. Claim 1 is a representative claim.

The Recited “sender is Not Shown

Claim 1 recites in part a sender “a first controller configured to receive a data item including a transmit data portion and a retain data portion” and “a first tag generator configured to generate a first tag and associate the first tag with the retain data portion,” where “the transmit data portion, but not the first tag” is sent to a target via a first transmitter.

According to Regnier, “data (message) transfer requests are represented by descriptors.” *Col. 5, lines 14-15, col. 2, lines 50-53.* Thus, as Fig. 5 is understood, the host computer 502 makes a data transfer request by sending a “descriptor” to the VI NIC 500. Figs. 7A and 7B show two different kinds of descriptors, as explained in col. 5, lines 28-65. There is no discussion in Regnier that the host computer 502 transmits only a portion of a descriptor while retaining a portion of the descriptor. In fact, since the descriptor contains the information needed for the data request, it serves no purpose for the host computer 502 to transmit only a portion of the descriptor and to retain a portion of the descriptor. Thus, Regnier fails to show the recited “sender” having “a first controller configured to receive a data item including a transmit data portion and a retain data portion.”

Furthermore, Regnier does not show the recited sender having “a first tag generator configured to generate a first tag and associate the first tag with the retain data portion.” As understood, the Office action relied on Regnier’s “memory protection tags” for teaching the recited “first tag generator.” Regnier’s “memory protection tags” are discussed in

col. 6, lines 41 and following. The “memory protection tags” are data fields in a table (TPT 514) that exists in VI NIC 500, “memory protection tags are unique identifiers (within a VI provider) that are associated both with VIs and with memory regions.” *Col. 6, lines 41-43*. Regnier therefore does not teach the recited “sender” having “a first tag generator configured to generate a first tag,” nor does Regnier teach to “associate the first tag with the retain data portion.” It follows then that Regnier does not teach the recited sender where “the transmit data portion, but not the first tag” is sent to a target via a first transmitter, since Regnier’s host computer 502 does not generate tags in the first place.

The Recited “target” is Not Shown

Claim 1 further recites in part a target having “a first receiver ... to receive the transmit data portion sent by the sender,” “a second controller ... to identify return data corresponding to the transmit data portion,” and “a second tag generator ... to independently generate a second tag and associate the second tag with the return data” where “the return data and the second tag” are sent to the sender via a second transmitter.

It is acknowledged that Regnier teaches that data transfers are made by sending “descriptors” from the host computer 502 to the VI NIC 500. *Col. 5, lines 14-15, col. 2, lines 50-53*. However, as explained above, there is no teaching that the host computer 502 retains a portion of the descriptor and transmits a portion of the descriptor. Therefore, the VI NIC 500 does not receive “a transmit data portion” as recited in the pending claims. Regnier thus does not show the recited target having “a first receiver ... to receive the transmit data portion sent by the sender.”

Fig. 10 describes in col. 6, lines 28-44 operation of the VI NIC 500 for a send descriptor. Regnier discloses that a protection tag corresponding to a received descriptor is retrieved, and “if the retrieved protection tag matches the protection tag associated with the local (sending) process (the ‘yes’ prong of step 1008), the NIC sends the message toward the destination (remote) process by transmitting it (the message or data) to the network (see FIG. 5).” *Col. 6, lines 35-40*. Regnier does not discuss sending the tag all; the tag is simply used to determine a subsequent action. Regnier therefore does not teach the recited “target” having “a second tag generator ... to independently generate a second tag and associate the second tag with

the return data” where “the return data and the second tag” are sent to the sender via a second transmitter.

Fig. 11 describes in col. 6, lines 45-61 operation of the VI NIC 500 for a read descriptor. Regnier discloses that a protection tag corresponding to a received descriptor is retrieved, and “if the retrieved protection tag matches the protection tag associated with the local (receiving) process (the ‘yes’ prong of step 1108), the NIC copies the message into the local process’ memory.” *Col. 6, lines 53-56*. Regnier discloses copying a message, not the tag; the tag is simply used to determine whether or not to perform the copy operation. Regnier therefore does not teach the recited “target” having “a second tag generator ... to independently generate a second tag and associate the second tag with the return data” where “the return data and the second tag” are sent to the sender via a second transmitter.

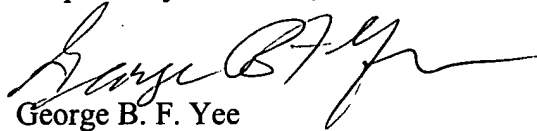
For at least these foregoing reasons, the Section 102 rejection of the claims is believed to be overcome. Reconsideration of the claims is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,


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